5. Descriptions of some New Species of Limopsis from the Cumingian Collection. By Arthur Adams, F.L.S.

There have been six recent species of *Limopsis* already described, namely, *L. multistriata*, Forsk.; *L. belcheri*, Adams & Reeve; *L. cancellata*, Reeve; *L. borealis*, Woodward; *L. pygmæa*, Phil.; and *L. oblonga*, A. Adams. To these I now add five more recent species from the seas of Japan, one from the Cape, and two from Lizard Island in Torres Straits. Those from Japan and the Cape were obtained by myself; and for the Australian examples we are indebted to Mr. Macgillivray. Nearly all the known species are in the magnificent collection of Mr. Cuming.

1. Limopsis japonica, A. Adams.

L. testa orbiculari vix æquilaterali, albida aut rufescente, costellis radiantibus striisque elevatis concentricis concinne cancellata, epidermide fusca dense pilosa, pilis in fimbriis concentricis dispositis, obtecta, intus rufo-fusca, radiatim strigosa, albo marginata; margine ventrali explanato, intus integro.

Hab. Kuro-Sima, 57 fathoms; Kiusu, 26 fathoms.

This species in form and sculpture most nearly resembles *Pectunculus cancellatus* of Reeve, which is a true *Limopsis*. It is, however, much larger, the radiating ribs are equal, and the hinge-margin is not straight, and is extended in the form of auricles.

2. Limopsis obliqua, A. Adams.

L. testa valde obliqua, oblonga, inæquilaterali, tumidula, albida, longiore quam lata, latere antico brevi, postico longiore, radiatim striata, liris crenulatis concentricis decussata, epidermide dense pilosa fusca obtecta; linea cardinis arcuata, fossa magna triangulari; intus alba radiatim strigosa, margine ventrali intus lævi.

Hab. Uraga, 21 fathoms.

This species is even more oblique than *L. oblonga*, A. Ad. (Ann. and Mag. Nat. Hist. 1860), from which it differs in being oval, and not trigonal, in the broad triangular cartilage-pit, and in the ventral margin not being internally crenate.

3. Limopsis cumingi, A. Adams.

L. testa ovata, valde obliqua, inæquilaterali, latiore quam longa, compressa, albida, concentrice lirata, interstitiis longitudinaliter radiatim striatis, latere antico brevi, postico multo longiore dilatato, epidermide pilosa pallide fusca, pilis in fimbriis concentricis dispositis, obtecta, intus alba, margine ventrali intus lævi.

Hab. Gotto, 48 fathoms; Santanomosaki, 55 fathoms.

This species somewhat resembles *L. belcheri* in form, but the posterior side is regularly arcuate, and the hinge-margin is bent in the middle; the teeth, moreover, are much less numerous, and the ventral margin of the valves is not crenate within.

4. Limopsis crenata, A. Adams.

L. testa oblique ovata, longiore quam lata, convexa, oblonga, latere antico rotundato, postico declivi, longitudinaliter radiatim substriata, concentrice sulcata, liris concentricis subdistantibus crenatis, epidermide dense pilosa, pilis in fimbriis concentricis dispositis, obtecta, intus alba strigosa, margine ventrali intus crenulato.

Hab. Uraga, 21 fathoms; Satanomosaki, 55 fathoms.

Most like *L. obliqua* in form, but less prolonged from the beaks to the ventral margin; it is also more gibbous, and the surface of the valves is furnished with prominent concentric crenate liræ.

5. Limopsis forskalii, A. Adams.

L. testa subtrigonali, solida, orbiculata, subæquilaterali, tumida, latere postico declivi, rufescente, costellis radiantibus striisque concentricis elevatis cancellata, costellis minoribus et majoribus alternantibus, intus pallide rufa, linea cardinis castaneo tincta, margine ventrali intus lævi.

Hab. O-Sima; Takano-Sima; on the sands, dead.

This is a strong, subtrigonal, cancellated species, most nearly resembling *L. japonica*; but it is more triangular in outline, the sculpture is much coarser, and the hinge-margin is narrower and more arcuated.

6. Limopsis philippii, A. Adams.

L. testa vix orbiculari, subobliqua, gibba, subæquilaterali, pallide fusca, costellis radiantibus æqualibus confertis lirisque crenulatis concentricis reticulata, latere postico rotundato, epidermide fusco-pilosa partim obtecta.

Hab. ——?

This is a gibbous, somewhat oblique species, neatly reticulated with radiating riblets and elevated concentric lines. It is more gibbous than any of the other species, and the surface of the valves is partly covered with a pale brown epidermis.

7. Limopsis abyssicola, A. Adams.

L. testa valde obliqua, inæquilaterali, gibba, lineis elevatis radiantibus et lirulis concentricis crenulatis decussata, latere antico brevi, rotundato, postico longiore declivi non dilatato, epidermide fusca pilosa, pilis in fimbriis dispositis, obtecta.

Hab. Cape of Good Hope, 136 fathoms.

This is the species actually dredged from 136 fathoms, off the Cape, during the voyage of H. M. S. 'Samarang.' The shell figured as *Pectunculus belcheri* (Moll. Voy. Sam. pl. 22. f. 5), a much larger and more compressed species, was, I believe, obtained from the Korean Islands, and most nearly resembles *L. cumingi*, which, however, has not the ventral margin internally crenate.

8. Limopsis macgillivrayi, A. Adams.

L. testa oblique ovata, inæquilaterali, gibbosula, albida, costellis

tenuibus nodulosis radiantibus et striis vix elevatis concentricis crenulatis concinne decussata, latere postico longiore et dilatato, umbonibus subacutis, epidermide fusco-pilosa partim obtecta.

Hab. Lizard Island, Torres Straits.

An oblique species, most nearly resembling *L. multistriata*, with the surface of the valves very neatly sculptured with numerous fine radiating ribs, crossed by slightly elevated concentric lines.

9. Limopsis woodwardi, A. Adams.

L. testa orbiculari, subæquilaterali, convexa, marginibus crenulatis, candida, costellis acutis tenuibus radiantibus et lirulis concentricis crenulatis decussata, costellis breviculis circa marginem ventralem interpositis ad medium valvarum evanidis, linea cardinis regulariter arcuata, dentibus acutis lamellatis prominentibus, fossa trigonali conspicua, margine ventrali intus lævi.

Hab. Lizard Island, Torres Straits.

This is a pure-white species, with the surface of the valves very delicately sculptured; the hinge-teeth are sharp and prominent, and the concentric liræ cause the radiating ribs to assume a nodulous character.

6. On the Species of Obeliscinæ found in Japan. By Arthur Adams, F.L.S., etc.

In this subfamily of *Pyramidellidæ*, the members of which are nearly all of small size, and which appear to be tolerably numerous in the seas of Japan, the form of the shell is subulate, the texture vitreous, and the surface usually polished. Nearly all the species of *Obeliscus* and *Syrnola* are prettily adorned with a spiral red-brown zone, which usually marks a line at the sutures, and crosses the last whorl at the periphery. The *Syrnolæ* are usually of small dimensions, and the inner lip is always furnished with a single parietal plait: the *Styloptygmæ* have the peritreme entire, as in *Chrysallida*, but the whorls are not plicate. In most of the specimens of *Syrnola* found, the apex of the spire is seen to be decollated. This is owing to the extreme fragility of the nucleolar whorls, which in some species form a cylindrical transparent mucro, terminating in a little globose, decumbent, sinistral whorl. In *S. cinctella*, the mucro of which is very elongated, the number of similar pellucid nucleolar whorls is about eight.

I have not hitherto been able to trace any connexion between the form or character of the shell and the internal transverse grooves seen in the whorls of so many species. Similar grooves are met with in several other genera of *Pyramidellidæ*, and also of *Helicidæ* and *Ellobiidæ*. That they serve some good purpose in the economy of the animal is no doubt true, although at present it has not been detected by our observation.

The species of *Syrnola* usually inhabit deep water, and live on a